

REMARKS/ARGUMENTS

Applicant responds herein to the Office Action dated December 30, 2005.

Claims 1-5, 8, 19 and 20 stand rejected on grounds of obviousness over Sugimoto (U.S. Publication 2002/0051644), in view of Ettinger (6,079,693). Claim 6, 7, and 9-14 are being rejected on grounds of obviousness over Sugimoto and Ettinger, in further view of Kaneko (6,009,890). Claim 15 is being rejected over Sugimoto, Ettinger, in further view of Johnsgard (6,403,925). Lastly, claims 16-18 are being rejected over Sugimoto, Ettinger and Johnsgard, in further view of Kim (6,866,745). However, these rejections have been mooted by the cancellation of claims 1-20 (without prejudice) and the replacement thereof with newly presented claims 21-40.

As a preliminary matter, applicant believes that the newly presented claims 21-40 are supported in the original specification, as noted below:

Support for claims 21 and 36 is found at the original claim 1, and page 9, line 25 to page 10, line 9; page 12, lines 16-21; page 12, line 25 to page 13, line 6; page 28; lines 9-12; page 30; lines 4-7; and Fig. 4 of the instant specification.

Support for claims 22 and 37 is found at page 29, line 24 to page 30, line 17 of the instant specification.

Support for claims 23 and 38 is found at page 30, lines 1-3 of the instant specification.

Support for claims 24 and 39 is found at page 31, lines 2-8, and Figs. 7 and 8 of the instant specification

Support for claims 25 and 40 is found at Fig. 4 of the instant specification.

Support for claim 26 is found at page 30, lines 18-21 of the instant specification.

Support for claim 27 is found at page 28, lines 7-9 of the instant specification.

Support for claim 28 is found at original claim 6.

Support for claim 29 is found at page 30, lines 22-24, and page 34, lines 11-13 of the instant specification.

Support for claims 30-35 is found at the original claims 15-20, respectively.

From a substantive perspective, applicant believes that none of claims 21-40 present subject matter which is either anticipated, or rendered obvious by the prior art that the Examiner has applied to claims 1-20.

Thus, none of the prior art of record discloses "disposing a first light-blocking section in a process chamber composed of a light-blocking material, and disposing a plurality of second light-blocking sections between an indexer section and a process chamber that are respectively capable of blocking light passing into the same process chamber."

Sugimoto discloses a plurality of shutters 1059 (Fig. 9) that are arranged in a plurality of locations. However, being provided in process chambers 1051 different from each other, the plurality of shutters 1059 do not block light passing into the same process chamber. In addition, Sugimoto fails to disclose that the process chambers 1051 are composed of light-blocking material.

Kaneko discloses three shutters 101, 102 and 103 (Fig. 25). Yet the shutters 101 and 102 are disposed between a carrier 1 and indexer mechanisms 14, 16 to directly load and unload a substrate with respect to the carrier 1. Namely, only one shutter 103 exists between an interface section 4 including the indexer mechanisms 14, 16 and a process chamber 51. Kaneko requires opening the shutters 101 and 102 in order to load and unload the substrate. Accordingly, light having passed in the course of loading and unloading the substrate is blocked only by the one shutter 103, which makes it very likely for light to pass into the process chamber 51 (process section 3).

Meanwhile, according to claim 21 of the present invention, the plurality of second light-blocking sections are provided between the indexer section including the indexer mechanism and the process chamber. This eliminates the need to open any of the plurality of second light-blocking sections even when the indexer mechanism performs the loading and unloading of the substrate, thus blocking light passing into the process chamber with certainty. Moreover, the provision of the plurality of second light-blocking sections in addition to the first light-blocking section disposed in the process chamber helps to block light passing into the process chamber with further certainty.

In addition, no evidence has been set forth to suggest a motivation to combine Sugimoto and Kaneko. The Examiner's assertion mentioned in the Office Action that the gated sections provided would protect the substrates from any process proceeding in any other section is not found in Sugimoto or Kaneko. It is only through impermissible hindsight reconstruction of applicant's invention that this assertion can be made.

Moreover, according to claim 21, light moving toward the process chamber directed to the organic matter removal process can be blocked with certainty, thus characteristically preventing any detrimental effect from being produced with light as a catalyst in the process chamber.

Claim 22 depends from independent claim 21.

In addition, none of the prior art of record discloses "disposing a housing to perform light blocking of the inside of the housing between the indexer section including the indexer mechanism and the process section." In Kaneko, only a wall exists between the interface section 4 including the indexer mechanisms 14, 16 and the process section 3, without the presence of a housing to perform light blocking of the inside of the housing. Kaneko is also silent on the issue of each element performing light blocking of the inside of each element.

Claim 24 depends from independent claim 21.

In addition, none of the prior art of record discloses "disposing a cover section to cover an edge part of the shutter in an edge part of the gate section". With this feature, light passing from the surroundings of the gate section can be blocked with certainty.

Claim 25 depends from independent claim 21.

In addition, none of the prior art of record discloses "orthogonally arranging a shutter included in the first light-blocking section and the shutters included in the plurality of second light-blocking sections, respectively." With this feature, light passing into the process chamber can be blocked with certainty.

Claim 31 depends indirectly from independent claim 21.

Johnsgard teaches a viewing window 505, and Kim teaches a light emitter 230. Both of these references are silent, however, regarding a control to link the viewing window 505 and the light emitter 230. Therefore, the feature that the illumination element is brought into its active

state of executing illumination when the viewing window is opened, and the illumination element is brought into its inactive state of not executing illumination when the viewing window is closed, is not to be rendered obvious by those references.

Claim 32 depends indirectly from independent claim 21.

While Johnsgard teaches the viewing window 505, no suggestion has been made at all in Johnsgard of the control linking the viewing window 505 and a substrate process. Therefore, the feature of a "window-open prohibiting element to prohibit the opening of the viewing window at least during a period of time that the substrate is processed with the removal liquid" is not rendered obvious by the reference.

Claim 33 depends indirectly from independent claim 21.

While Johnsgard teaches the viewing window 505, no suggestion is made in Johnsgard regarding the control to the viewing window 505 and a substrate process. Therefore, the feature of "a removal-liquid-supply prohibiting element to prohibit the supply of the removal liquid from the removal liquid supply element at least during a period of time that the viewing window is opened" is not rendered obvious by the reference.

None of the prior art of record discloses "disposing a first shutter composed of a light-blocking material in a process chamber composed of a light-blocking material, and disposing a plurality of second shutters that are composed of a light-blocking material and open and close a plurality of gate sections that are formed in a transport path for the substrate that extends from the indexer section to the process chamber, and arranged in a direction orthogonal to the direction of transport of the substrate."

According to claim 36 of the present invention, the plurality of second shutters are provided between the indexer section including the indexer mechanism and the process chamber. This eliminates the need to open any of the plurality of second shutters even when the indexer mechanism performs the loading and unloading of the substrate, blocking light passing into the process chamber with certainty. Moreover, the provision of the plurality of second shutters in addition to the first shutter disposed in the process chamber blocks light passing into the process chamber with further certainty.

Claim 37 depends from independent claim 36.

In addition, none of the prior art of record discloses "disposing a housing to perform light blocking of the inside of the housing between the indexer section including the indexer mechanism and the process section." In Kaneko, only a wall exists between the interface section 4 including the indexer mechanisms 14, 16 and the process section 3, without the presence of a housing to perform light blocking of the inside of the housing. Kaneko is also silent on the issue of each element performing light blocking of the inside of each element.

Claim 39 depends from independent claim 36.

In addition, none of the prior art of record discloses "disposing a cover section to cover an edge part of at least one of the plurality of second shutters in an edge part of at least one of the plurality of gate sections." With this feature, light passing from the surroundings of the gate section can be blocked with certainty.

Claim 40 depends from independent claim 36.

In addition, none of the prior art of record discloses "orthogonally arranging the first shutter and the plurality of second shutters". With this feature, light passing into the process chamber can be blocked with certainty.

The remaining claims 23, 26-30, 34, 35 and 38 are all dependent from or the other of the aforementioned claims and impose further limitations thereon. As such, they are inherently distinguishable over the prior art.

Accordingly, the Examiner is respectfully requested to reconsider the application, allow the claims as amended and pass this case to issue.

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